WHAT IS CLAIMED IS:

1   1.   A method for generating an electrical schematic,

2   comprising:

3   loading a schematic definition file;

4   determining circuit component placement relationships

5   according to the schematic definition file and a

6   component rule set;

7   creating a schematic output file corresponding to the

8   circuit competent placement relationships and the

9   schematic definition file, wherein the schematic

10   output file describes an automatically-generated

11   electrical schematic corresponding to the

12   schematic definition file.

1   2.   The method of claim 1, further comprising loading a

2   circuit-requirements file, the circuit-requirements

3   file being in a first format, and generating a

4   corresponding schematic definition file, the schematic

5   definition file being in a second format.

1   3.   The method of claim 1, further comprising displaying

2   an electrical schematic corresponding to the schematic

3   output file.

1   4.   The method of claim 1, further comprising receiving

2   user edits of the automatically-generated electrical

3   schematic.

1   5.   The method of claim 1, further comprising defining a
2   location of a first component of the schematic
3   definition file, and defining locations of a plurality
4   of second components of the schematic definition file
5   in relation to the location of the first component.

1   6.   The method of claim 1, further comprising displaying a
2   three-dimensional image, corresponding to the
3   automatically-generated electrical schematic, showing
4   the relative three-dimensional location of multiple
5   circuit components.

1   7.   The method of claim 1, wherein the schematic output
2   file includes both two-dimensional and three-
3   dimensional location data for a plurality of
4   electrical components.

8.   A data processing system having at least a processor
     and accessible memory, comprising:
     means for loading a schematic definition file;
     means for determining circuit component placement
          relationships according to the schematic
          definition file and a component rule set;
     means for creating a schematic output file
          corresponding to the circuit competent placement
          relationships and the schematic definition file,
          wherein the schematic output file describes an
          automatically-generated electrical schematic
          corresponding to the schematic definition file.

9.   The data processing system of claim 8, further
     comprising means for loading a circuit-requirements
     file, the circuit-requirements file being in a first
     format, and means for generating a corresponding
     schematic definition file, the schematic definition
     file being in a second format.

10. The data processing system of claim 8, further
     comprising means for displaying an electrical
     schematic corresponding to the schematic output file.

11. The data processing system of claim 8, further
     comprising means for receiving user edits of the
     automatically-generated electrical schematic.

1   12.   The data processing system of claim 8, further
2   comprising means for defining a location of a first
3   component of the schematic definition file, and means
4   for defining locations of a plurality of second
5   components of the schematic definition file in
6   relation to the location of the first component.

1   13.   The data processing system of claim 8, further
2   comprising means for displaying a three-dimensional
3   image, corresponding to the automatically-generated
4   electrical schematic, showing the relative three-
5   dimensional location of multiple circuit components.

1   14.   The data processing system of claim 8, wherein the
2   schematic output file includes both two-dimensional
3   and three-dimensional location data for a plurality of
4   electrical components.

1   15. A computer program product tangibly embodied in a
2   machine-readable medium, comprising:
3   instructions for loading a schematic definition file;
4   instructions for determining circuit component
5   placement relationships according to the
6   schematic definition file and a component rule
7   set;
8   instructions for creating a schematic output file
9   corresponding to the circuit competent placement
10   relationships and the schematic definition file,
11   wherein the schematic output file describes an
12   automatically-generated electrical schematic
13   corresponding to the schematic definition file.

1   16. The computer program product of claim 15, further
2   comprising instructions for loading a circuit-
3   requirements file, the circuit-requirements file being
4   in a first format, and instructions for generating a
5   corresponding schematic definition file, the schematic
6   definition file being in a second format.

1   17. The computer program product of claim 15, further
2   comprising instructions for displaying an electrical
3   schematic corresponding to the schematic output file.

1   18. The computer program product of claim 15, further
2   comprising instructions for receiving user edits of
3   the automatically-generated electrical schematic.

1   19.   The computer program product of claim 15, further
2   comprising instructions for defining a location of a
3   first component of the schematic definition file, and
4   instructions for defining locations of a plurality of
5   second components of the schematic definition file in
6   relation to the location of the first component.

1   20.   The computer program product of claim 15, further
2   comprising instructions for displaying a three-
3   dimensional image, corresponding to the automatically-
4   generated electrical schematic, showing the relative
5   three-dimensional location of multiple circuit
6   components.

1   21.   The computer program product of claim 15, wherein the
2   schematic output file includes both two-dimensional
3   and three-dimensional location data for a plurality of
4   electrical components.